**IT Applications Unit 3, AOS 1, Online Communities**

Complete the following, from Chapter 2, Problem-solving Methodology, pgs, 60-80

**Designing a website solution, p 66**

**Problem-solving Methodology: 4 Stages**

**Analyse**

**Design**

**Development**

**Evaluate**

**Case Study:**

**Indigenous Language Trust, (ILT)**

Using the case study, ILT complete the following:

**Designing a website solution, p 66**

1. List the techniques that web developers can use to ensure their website is efficient?

To ensure an efficient website the developers utilise various techniques including;

* Using CSS (Cascading Style Sheets) and templates to reduce time and hence effort and cost spent in developing the pages
* Reducing the time spent waiting for a page to load by ensuring images are in small format or thumbnails and other methods where appropriate
* Using a clear navigation system that prevents the user second guessing the direction to take from the navigation system/s

1. List the techniques that web developers can use to ensure their website is effective?

To ensure an effective website the developers utilise various techniques including;

* Ensuring that it is still appearing in an effective way after different browsers and devices decide on the result to display
* Making the links already visited appear as a different colour to prevent frustrating backtracking double viewing
* Keeping the layout consistent throughout the site while ensuring the buttons and other interactive material is using a easy to understand method or approach.
* The use of appropriate contrast and other elements, principles, formats and conventions to ensure the end product is easy to read and understand while possibly also ensuring the catering for impaired users such as those with colour blind.
* In relation to the above point and expanding it, ensuring that sound and images are provided with an alternative method to gain the information about them, while being used for non-essential purposes where possible

**Identifying how a solution will function**

1. Taking into account the technical constraints a range of design tools can be used to show the functionality of the website. Elaborate on each of the following functional design tools:
2. IPO Charts

The function a IPO (Input-Process-Output) chart plays is to show how data is converted into meaningful information. It shows what data is required to reach the required outcome while showing the steps required inbetween to reach the answer.

1. Flowcharts

A flow chart shows how a user might gain access to information or how a solution is produced. This is done by showing each procedural step required in a linear sequence using accepted standard symbols.

1. Layout diagrams

A layout diagram or style sheet is used to show how a webpage will function such as what will happen when a user clicks on this link, what will happen if a account name and password is typed and what alt text will be used if a user has images off for various reasons.

1. Website map

A website map or often refered as a site map or linkage plan is a graphical representation of how the pages will link together, it is a series of completely hand drawn (though computer software can often do it as well) boxes attached to each other to give the designer a overall picture of how large a website will be and where he needs links to go. It also shows the interconnections between the boxes and what pages are closed and what are open so the designer can apply appropriate techniques to ensure accurate connections and security for closed pages. It also determines the pages names that will be used.

1. What does information architecture refer to?

Information architecture refers to the structure of the website and its navigation pathways and is often communicated through a site map.

**Navigation Design**

1. What considerations need to be taken into planning the navigation design?

When creating the navigation design you should ensure that the images used a clear and meaningful while having a text equivalent as well to guarantee that the users understand what is required. Likewise as a essential part of the website it shouldn’t require any plugins to work.

1. What’s meant by making your website accessible?

Making your website accessible refers to ensuring that any user no matter what browser they are using or what plugins they have can access and view the webpage in its correctly formatted form. Likewise it is also, is ensuring that icons ect are used from a commonly accepted convention.

1. What is a style guide?

A style guide is used to provide instructions to website developers about where to use different type sizes and fonts, and whether these should be bold or italic. Likewise they also contain information on the colours and patterns to be used as backgrounds on webpages. Therefor the formats and conventions are also documented in the style guide.

1. List the conventions of file naming.

Some of the file naming conventions include;

* Ensuring the first/home page is to be labelled as index.\*, or default.\* (where star is either html or htm) which one depends on the service providers.
* Names kept short and meaningful whether it be for a webpage, image ect
* Lowercase as easier to read
* Usually limited to 16 characters and only containing letters, numbers or underscores.

**Identifying how a solution will appear using design tools, p 70**

**Elaborate on the following:**

1. Mock-up diagram

A mock-up diagram is a sketch of the actual website that the designer is going to develop. This may be done by hand or through a drawing package such as illustrator, with headings in place, and spaces left for the text that needs to be inserted. Usually the text included is using the font Lorem Ipsum latin text. Therefor it could be referenced to z picture approximating the general look of the page to give a clear idea of what the final layout will look like.

1. Layout diagrams

Layout diagrams are used to provide a visual representation of how the final product should look. Usually drawn by hand containing information on where particular text and graphics are to be located. Often many versions are created till a satisfactory version is produced that follows all the necessary design elements and principles as well as conventions to create a balance attractive design.

1. Storyboard designs

Storyboard designs are primarily used to design the features of each individual page by utilising ultimately a layout diagram and including knowledge on actions and links that will be used. Other features to include are;

* Clients name such as the ILT here
* Designers name
* Page number
* Background colour code
* List of the image filenames and their file size
* A list of the required link file names
* Embedded objects such as movies or flash objects
* Often screen dimensions

**Formats and conventions,** p 73

Elaborate on the following formats and conventions

* Screen size

When developing a project the screen size must be considered as users may not have as big a screen as the developer hence considerate development and testing on and for a normal screen size is essential for correct. Commonly the recommended size will be displayed at the bottom of the index page. On a related note a line of text shouldn’t be longer than 60 characters or about 10-11 words.

* Index or home page

The index or home page should be labelled as index.\* or default.\* where \* may be html or htm. On another note on this page a user should be able to find a contact email address, date of last modification and the author or companies name and contact details.

* Scrolling

It is generally advisable to make the content on a page, fit within on to a max of generally 2 screen full vertically rather than requiring scrolling, likewise with horizontal scrolling it should be kept for only moments when most needed.

* Text

For the use of text in your webpage some general standards are applied these include;

* Once a alignment is decided upon for a page, you should stick with it
* Avoid using all uppercase except in some heading
* Using bold or italics should be used sparingly to prevent depreciation when used for their emphasis of important words.
* Avoid the underlining of words as it may be confused for a link
* For the numbers one-nine written and > that use words
* Navigation
* Try to keep links to other pages open where possible to especially the home page as it helps the user feel orientated
* Font selection
* Try to have consistent use of fonts and sized between 9-12 pt
* Images and file size

Images and other file sizes should remain low to prevent a webpage taking too long to open or fail to open at all due to timeout

* Style guides

If you follow the style guide for the situation then the end product will match the rest of the website and follow formats and conventions

1. With the ILT case study what formats and conventions have been chosen?

Some of the key formats and conventions chosen include;

* Applying contrast between the content and the background
* Following only one alignment
* Consistency of location for links